STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE
This permit includes designated equipment subject to New Source Performance Standards (NSPS).

This permit supersedes three permits:

- your permit dated August 15, 1997, as amended May 14, 1998, January 12, 2000, December 2, 2003, January 22, and November 10, 2004,
- your permit dated January 23, 2002, as amended January 22, 2004, and
- your permit dated May 9, 2002, as amended January 22, 2004.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Huber Engineered Woods, LLC
Route 3, Hwy. 626
P.O. Box 38
Crystal Hill, VA 24539
Registration No.: 30905
No.: 083-00050

is authorized to modify and operate an

Oriented Strandboard Facility

located on

Route 626, approximately 4 miles north of the intersection of Routes 626 and 360
near Crystal Hill, in Halifax County, Virginia

in accordance with the Conditions of this permit.

Approved on DRAFT

T. L. Henderson
Regional Director, South Central Regional Office

Permit consists of 19 pages.
Permit Conditions 1 to 52.
Attachment 1: WESP, and Dryer RTO Sequence of Operation

INTRODUCTION

This permit approval is based on the permit applications, amendment information, and supplemental information as represented in the following documents:

- The permit application dated August 25, 1993, including amendment sheets dated September 9, September 14, September 16, October 1, October 20, October 25, November 4, and November 9, 1993, July 12, 1994, May 9, July 22, August 13, September 19, November 15, November 19, and November 22, 1996, January 28, February 24, February 17, April 3, July 3, July 9, July 15, July 25, 1997, September 8, October 21, and December 9, 1999, November 13, and December 22, 2003, and May 7, September 2, November 21, 2003, and January 7, January 30, March 3, March 15, March 24, 2004 and the application dated April 14, 2005 including amendment sheets dated June 28 (two submittals), August 2, August 8 (two submittals), August 17, August 29, October 4, October 11, December 21, 2005, and. January 16, and February 14, and December 11, 2006 (two submittals) and April 16, 2007.

- The permit application dated November 19, 2001, including amendment information dated January 8, 2002 and December 22, 2003.

- The permit application dated March 20, 2002, including amendment information dated April 17, 2002, December 22, 2003, and July 26, 2006.

Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. Equipment List -

Equipment to be Modified			
Ref. No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**
---	(4) rotary drum flake dryers, each with a process cyclone	66 oven dry tons of wood flakes per hour, combined	Note 1
---	(3) 10 feet diameter X 30 feet long rotary blenders (manufactured by Coil)	90 oven dry tons of wood flakes per hour, combined	Note 1
---	(1) 103 inch wide X 316 feet long Continuous Mat forming machine (manufactured by PS&E/Simplekamp)	63 oven dry tons of wood flakes per hour	Note 1
---	(1) 8 feet wide X 24 feet long, 14 opening simultaneous closing platen press	63 oven dry tons of wood flakes per hour	Note 1
RTO 5	(1) Regenerative Thermal Oxidizers	---	Note 1
---	(1) brand name logo and nail mark application system	feed rate of (65) 4 foot by 8 foot panels per minute	Note 1
---	(3) above ground storage tanks	10,000 gallon, each	Note 1

Previously permitted equipment at this facility prior to the date of this permit consists of an Oriented Strandboard (OSB) manufacturing facility. The principle equipment previously permitted includes:			
Ref. No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**
---	(1) wood-fired energy system, including a thermal oil heat exchanger	240 x 10^6 BTU/hr, including 40 x 10^6 BTU/hr	NSPS Subpart Dc and Note 1
---	(1) gas-fired backup thermal oil heater	40 x 10^6 BTU/hr	NSPS Subpart Dc and Note 1
---	(4) 10 feet diameter X 30 feet long rotary screens	---	Note 1
---	(3) Panel edge paint booths	---	Note 1
---	(1) 4 feet wide tongue and groove cutting machine	---	Note 1
---	(1) 8 feet wide X 24 feet long panel saw	---	Note 1
---	(4) Wet Electrostatic Precipitators	---	Note 1
RTOs 1, 2, and 3	(3) Regenerative Thermal Oxidizers	---	Note 1
DC2B, DC3C, DC4C, and DC5	(4) Reverse air cleaned fabric filters	---	Note 1
---	(2) above ground liquid storage tanks	30,000 gallon, each	NSPS Subpart Kb and Note 1
---	(2) above ground liquid storage tanks	25,500 gallon, each	NSPS Subpart Kb and Note 1
---	(1) above ground liquid storage tank	15,900 gallon	Note 1
---	(1) above ground liquid storage tank	12,000 gallon	Note 1
---	(4) above ground liquid storage tanks	10,000 gallon, each	Note 1
---	(1) above ground liquid storage tank	2,200 gallon	Note 1

---	(1) above ground liquid storage tank	1,000 gallon	Note 1
---	(4) above ground liquid storage tanks,	500 gallon, each	Note 1
---	(5) above ground liquid storage tanks	400 gallon, each	Note 1
---	(1) Vaporizer-Mixer	heat input capacity of 1.275 x 10^6 BTU/hr	Note 1
---	(2) ring debarkers	---	Note 1
---	(2) wood fuel storage bins	---	Note 1
---	miscellaneous covered flight, drag chain, and covered belt conveyors	---	Note 1
---	(1) six-head sander	feed rate of 175 feet per minute	Note 1

Equipment installed prior to the date of this permit			
Ref. No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**
RTO 4	(1) Regenerative Thermal Oxidizers	---	Note 1

Notes:
1. Equipment is subject to the requirements of 40 CFR 63 Subpart DDDD, Plywood and Composite Wood Products.

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 5-80-1180 D 3)

2. **Emission Controls** - Four (4) Wet Electrostatic Precipitators (WESPs) followed by (3) Regenerative Thermal Oxidizers (RTOs) shall control particulate, VOC and carbon monoxide emissions from the wood-fired energy system, and the flake dryers. The WESPs and the RTOs shall be dispatched in accordance with the Attachment 1 to this permit, "WESP, and Dryer RTO Sequence of Operation." The minimum combustion chamber temperature for any dryer RTO shall be maintained at 1500 ^{O}F when that RTO is receiving exhaust gas from the mixing chamber and any dryer is processing flakes. For the purposes of this permit, "dryer RTO" means any of the following: RTO #1, RTO #2, RTO #4, or RTO #5, and the "mixing chamber" means the pressure equalization plenum located downstream of the WESPs and upstream of the dryer RTOs. The dryer exhaust gas shall have a minimum one and one half (1.5) second retention time in each RTO combustion chamber.

   The control efficiency for VOC shall be a minimum of 96.0 percent. Each WESP and each RTO shall be provided with adequate access for inspection. Each WESP shall be equipped with a device for the continuous measurement of secondary current (direct current amperes) and secondary voltage (direct current volts) (by field) across the ESP. Each RTO shall be equipped with a device for the continuous measurement of the temperature in the combustion chamber.
   (9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Emission Controls** – Emissions from the press shall be captured by maintaining a negative pressure within the press enclosure room. The negative pressure shall be maintained by work practices, including but not limited to, the closing of man doors, hatchways, bay doors, and other similar openings used for access purposes, at all times during operation of the press,

except during short periods when the opening is being used for its intended purpose, such as personnel ingress/egress from the building. Particulate and VOC emissions from the press shall be controlled by a Regenerative Thermal Oxidizer (RTO #3). The minimum combustion chamber temperature for the RTO #3 shall be maintained at 1500 ^{O}F when the press is processing panels. The exhaust gas from the press shall have a minimum one (1) second retention time in the combustion chamber. The RTO #3 shall be provided with adequate access for inspection. The RTO #3 shall be equipped with a device for the continuous measurement of the temperature in the combustion chamber.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

4. **Emission Controls** - Particulate emissions from the resinated dust handling system, the unresinated dust handling system, the saw dust handling system, and the six- head sander shall be controlled by fabric filters. Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating**.**
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

5. **Emission Controls** - Particulate emissions from open storage of wood materials shall be controlled by wet suppression.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

6. **Fugitive Dust Emission Controls for the six-head sander fabric filter -** Fugitive dust emission controls shall include the following, or equivalent, as a minimum:

   a. Dust from material handling and load-out from the six-head sander fabric filter shall be controlled by wet suppression or equivalent (as approved in writing by the DEQ).

   b. All material from the six-head sander fabric filter being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.

   (9 VAC 5-50-260, 9 VAC 5-50-90 and 9 VAC 5-80-1180)

7. **Fugitive VOC Emission Controls for the brand name logo and nail mark application system -** Fugitive emission controls shall include the following, or equivalent, as a minimum:

   Volatile organic compounds shall not be intentionally spilled, discarded to sewers which are not connected to a treatment plant, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions.

   (9 VAC 5-50-260, 9 VAC 5-50-20 F and 9 VAC 5-80-1180)

8. **Fuel -** The approved fuels for the wood-fired energy system are on-site generated wood, purchased wood and on-site generated wastes. "On-site generated wood" is defined as wood feed stock, bark, resinated and unresinated saw and sander dusts, and other wood wastes capable of being hogged. This definition does not include wood contaminated with paints, plastics, finishing material or chemical treatments. "Purchased wood" is defined as clean wood and wood wastes which do not contain chemical treatments nor have affixed thereto paint and/or finishing materials or paper or plastic laminates or other foreign materials which might emit toxic air pollutants when burned. "On-site generated wastes" are defined as waste edge sealant from the clean up of the paint booths, waste wax and resin, paper products, WESP blowdown, and hydraulic and hot oil wastes. "Waste edge sealant" shall not include spray booth filters. “Waste wax and resin” includes both spillage and blender cleaning residue. "Paper products" are defined as cardboard, office paper, and kraft paper. “WESP blowdown” shall include both the liquid and solid fractions. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-1180)

9. **Fuel -** The approved fuels for the backup thermal oil heater are natural gas and propane. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1180)

10. **Test/Monitoring Ports -** The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested and safe sampling platforms and access shall be provided.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

11. **Fuel Throughput** -The wood-fired energy system shall consume no more than 233,600 tons per year of wood, 12 tons per year of waste edge seal, 40 tons per year of waste wax and resin, 365 tons per year of paper products, 0.26×10^6 cubic feet per year of WESP blowdown, and 5,000 gallons per year of hydraulic and hot oil wastes, each calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

12. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the NSPS Subpart Dc equipment as described in Condition 1 shall be operated in compliance with the requirements of 40 CFR 60, Subpart Dc.
(9 VAC 5-50-400 and 9 VAC 5-50-410)

13. **Requirements by Reference** Except where this permit is more restrictive than the applicable requirement, the NSPS Subpart Kb equipment as described in Condition 1 shall be operated in compliance with the requirements of 40 CFR 60, Subpart Kb
(9 VAC 5-50-400 and 9 VAC 5-50-410)

14. **Throughput** - The annual throughput of the oven dried flakes through the four dryers combined shall not exceed 578,160 tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

15. **Throughput** - The annual throughput of the oven dried flakes through the three blenders combined shall not exceed 551,976 tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

16. **Throughput** - The annual throughput of the oven dried flakes through the press shall not exceed 551,976 tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

17. **Throughput** - The annual throughput of the powdered resin shall not exceed 10,442 tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

18. **Throughput** - The annual throughput of the phenol formaldehyde liquid resin shall not exceed 7.52×10^6 gallons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

19. **Throughput** - The annual throughput of the MDI liquid resin shall not exceed 4.96×10^6 gallons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

20. **Throughput -** The throughput of Oriented Strandboard through the six-head sander shall not exceed 522×10^6 ft^2 per year, calculated monthly as the sum of each consecutive 12 month

period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

21. **Production** - The annual production of finished Oriented Strandboard shall not exceed 788.5 x 10^6 square feet per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. The rated square foot is based on a panel thickness of 3/8 inches.
(9 VAC 5-80-1180)

22. **Performance Test** – NOTE: THE TESTS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. Performance tests shall be conducted for Particulate Matter (PM) and Volatile Organic Compounds (VOC) on each primary control system to determine compliance with the emission limits contained in Conditions 2, 31, and 36. The "primary control systems" are defined as two (2) WESPs connected in parallel to a single RTO. The tests shall be performed, and demonstrate compliance, within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of the State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be arranged with the South Central Regional Office. The permittee shall submit a test protocol at least thirty (30) days prior to testing. Two (2) copies of the test results shall be submitted to the South Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

23. **Performance Test** - – NOTE: THE TESTS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. Performance tests shall be conducted for Particulate Matter (PM), Volatile Organic Compounds (VOC), and carbon monoxide (CO) from RTO #3 to determine compliance with the emission limits contained in Condition 33. The tests shall be performed, and demonstrate compliance, within 60 days after start-up of RTO #3. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of the State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be arranged with the South Central Regional Office. The permittee shall submit a test protocol at least thirty (30) days prior to testing. Two (2) copies of the test results shall be submitted to the South Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

24. **Stack Test** - – NOTE: THE TESTS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. Stack tests shall be conducted for Particulate Matter (PM), Carbon Monoxide (CO), Nitrogen Oxides (NOx), Volatile Organic Compounds (VOC), formaldehyde and phenol on each primary control system to determine compliance with the emission limits contained in Conditions 2, 31, and 36. The tests shall be performed, and demonstrate compliance, within 180 days after the submittal to the South Central Regional Office of the results of the performance tests required in Condition 22. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in Section 9 VAC 5-50-410. The details of the tests are to be arranged with the South Central Regional Office. The permittee shall submit a test protocol at least thirty (30) days prior to testing. Two (2) copies of the test results shall be submitted to the South Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

25. **Visible Emission Evaluation** - – NOTE: THE TESTS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. Concurrently with the particulate matter performance tests, Visible Emission Evaluations (VEE) in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted by the permittee on each primary control system and on RTO #3. Each test shall consist of thirty (30) sets of twenty-four (24) consecutive observations (at fifteen (15) second intervals) to yield a six (6) minute average. The details of the tests are to be arranged with South Central Regional Office. The permittee shall submit a test protocol at least thirty (30) days prior to testing. The evaluation shall be performed within sixty (60) days of achieving maximum operation, but no later than 180 days after initial start up. Two (2) copies of the test result shall be submitted to the South Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-170-160, 9 VAC 5-50-30 and 9 VAC 5-80-1200)

26. **Visible Emission Evaluation** - – NOTE: THE TESTS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. Concurrently with the stack tests, Visible Emission Evaluations (VEE) in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted on each primary control system. The details of the tests are to be arranged with South Central Regional Office.
(9 VAC 5-170-160, 9 VAC 5-50-30 and 9 VAC 5-80-1200)

27. **COMS** - Continuous emission monitors shall be installed on the stacks for RTO 1, RTO 2, RTO 4, and RTO 5 to measure and record opacity. The continuous emissions monitoring systems shall conform to the design specifications stipulated in 40 CFR 60, Appendix B, Performance Specification 1. The monitoring systems shall be installed, maintained, evaluated, calibrated and operated in accordance with 40 CFR 60.13, 40 CFR 60 Subpart Dc

and 40 CFR 60, Appendix B. During all periods of facility operation, the monitoring systems shall be in continuous operation except for system breakdowns, repairs, calibration checks, and zero and span adjustments.

After the initial performance evaluation, the permittee shall conduct opacity monitoring system audits, on a regularly scheduled basis, to demonstrate compliance with the calibration error specification (40 CFR 60, Appendix B, Performance Specification 1). In no case shall the length of time between audits exceed twelve months. Prior to the first scheduled audit the permittee shall submit, for approval, to the South Central Regional Office, the proposed audit procedures for the opacity monitoring system. A 30-day notification prior to the initial performance evaluation and each scheduled audit shall be submitted to the South Central Regional Office.

The permittee shall submit a report of monitored excess emissions and monitor performance semiannually. The reports are to be submitted, postmarked no later than 30 calendar days after the end of each semiannual period to the South Central Regional Office. The details and format of the report are to be arranged with the South Central Regional Office prior to the submission of the first report.
(9 VAC 5-50-40 and 9 VAC 5-50-50)

28. **PMS -** Parameter Monitoring Systems (PMS), meeting the design specifications of 40 CFR Part 60, Appendix B, shall be installed to measure and record the emissions of carbon monoxide from the stacks for RTO 1, RTO 2, RTO 4, and RTO 5 in ppmdv corrected to 16% O_2. Except where otherwise indicated in this permit, each PMS shall be installed, calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60.13, and Appendices B and F or DEQ approved procedures which are equivalent to the requirements of 40 CFR 60.13 and Appendices B and F. Data shall be reduced to one hour averages.
(9 VAC 5-50-40 F)

29. **COMS Performance Evaluations -** – NOTE: THE PERFORMANCE TESTS REFERENCED BY THIS CONDITION WERE FOR THE COMS ON RTOS 1, AND 2, AND HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. All continuous monitoring systems shall be installed and operational prior to conducting performance tests. Performance evaluations of the continuous monitoring system must take place during the performance tests under 9 VAC 5-50-30 or within thirty (30) days thereafter. Two (2) copies of the performance evaluations report shall be submitted to the South Central Regional Office within forty-five (45) days of said evaluation. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device.
(9 VAC 5-50-40)

30. **PMS Quality Control Program -** A PMS quality control program which is equivalent to the requirements of 40 CFR 60.13 and Appendix F shall be implemented for each parameter monitoring system except that Relative Accuracy Test Audits (RATA's) may be required less

frequently if approved by DEQ.
(9 VAC 5-50-40 F)

31. **Emission Limits -** Emissions from the operation of the wood-fired energy system, the flake dryers, and RTO 1, RTO 2, RTO 4, and RTO 5 shall not exceed the limits specified below:

	lbs/10^6 Btu	lbs/hr	tons/yr
Particulate Matter			
(Including condensable PM)	---	11.80	51.7
(Filterable PM only)	0.04	---	---
PM-10 (Including condensable PM)	---	11.80	51.7
Sulfur Dioxide	---	5.33	23.4
Nitrogen Oxides (as NO2)	---	43.98	192.6
Carbon Monoxide	---	42.48	186.0
Volatile Organic Compounds	---	13.70	60.0

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number 14.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

32. **Emission Limits -** Emissions from the operation of the resinated dust handling system (DC2B in the Blending/Forming area) shall not exceed the limits specified below:

	lbs/hr	tons/yr
Particulate Matter & PM-10	For limits see Condition 34	
Volatile Organic Compounds	18.90	58.0

The VOC emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with the VOC emission limits may be determined as stated in Condition number 21.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

33. **Emission Limits -** Emissions from the operation of the press shall not exceed the limits specified below:

	lbs/hr	tons/yr
Particulate Matter (includes condensable PM)	4.16	18.2
PM-10 (includes condensable PM)	4.16	18.2
Nitrogen Oxides (as NO2)	4.10	17.9
Carbon Monoxide	0.32	1.4
Volatile Organic Compounds	1.08	4.7

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number 16.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

34. **Emission Limits -** Emissions from the operation of the resinated dust handling system, the unresinated dust handling system, the saw dust handling system, and the six head sander shall not exceed the limits specified below:

	gr/dscf	lbs/hr	tons/yr
Resinated dust handling system (fabric filter ID = DC2B in Blending/Forming area)			
Particulate Matter	0.01	---	16.10
PM-10	0.01	---	16.10
VOC		For limits see Condition 32	
Unresinated dust handling system (fabric filter ID = DC4C)			
Particulate Matter	0.01	---	24.85
PM-10	0.01	---	24.85
VOC	---	9.36	41.0
Saw dust handling systems (fabric filter ID = DC3C in Finish Sawing and Sanding area)			
Particulate Matter	0.01	---	19.60
PM-10	0.01	---	19.60

VOC	---	7.56	33.1
Six head sander (fabric filter ID = DC5)			
Particulate Matter	0.01	---	17.4
PM-10	0.01	---	14.8
VOC	---	7.29	21.1

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

35. **Visible Emission Limits** - Visible emissions from the wood yard operations shall not exceed ten percent (10%) opacity. "Wood yard operations" are defined as sawing, debarking, and material handling of wood feed stock and storage of energy system fuels.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

36. **Visible Emission Limits** - Visible emissions from the stacks for RTO 1, RTO 2, RTO 4, and RTO 5, and from the stack for RTO #3 shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This Condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

37. **Visible Emission Limits** -Visible emissions from the resinated dust handling system's fabric filter, the unresinated dust handling system's fabric filter, the saw dust handling system's fabric filter, and the six-head sander fabric filter shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This Condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

38. **Visible Emission Limit -** Visible emissions from the six-head sander material handling, load-out, and storage shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

39. **Visible Emission Limit -** Visible emissions from the brand name logo and nail mark application system shall not exceed 5 percent.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

40. **Visible Emission Limits** - Visible emissions from other fugitive emission points shall not exceed ten percent (10%) opacity.
(9 VAC 5-80-1180 and 9 VAC 5-50-20E)

41. **Initial Notifications** - NOTES: THE NOTIFICATIONS REQUIRED BY THIS CONDITION HAVE BEEN COMPLETED. THIS CONDITION IS RETAINED FOR HISTORICAL REFERENCE PURPOSES ONLY. The permittee shall furnish written notification to the South Central Regional Office of:

    a. The actual date on which construction of the Oriented Strandboard Facility commenced within 10 days after such date.

    b. The anticipated start-up date of the Oriented Strandboard Facility postmarked not more than 60 days nor less than thirty (30) days prior to such date.

    c. The actual start-up date of the Oriented Strandboard Facility within 10 days after such date.

    d. The anticipated dates of the performance test and the stack test of the each primary control system postmarked at least thirty (30) days prior to such date.

    e. The anticipated date upon which demonstration of the continuous monitoring system performance commences postmarked at least thirty (30) days prior to such date.

    f. The anticipated dates of the performance test of RTO #3 postmarked at least fifteen (15) days prior to such date.

    Copies of written notifications referenced in items a, b, c and e above to be sent to:

    Chief Air Enforcement Branch (3AT20)
    U. S. Environmental Protection Agency
    Region III
    841 Chestnut Street
    Philadelphia, PA 19107

    (9 VAC 5-170-160 and 9 VAC 5-50-50)

42. **Initial Notifications for Modification**- The permittee shall furnish written notification to the South Central Regional Office of:

    a. The actual date on which modification of the Oriented Strandboard Facility commenced within 30 days after such date.

    b. The actual start-up date of the modified Oriented Strandboard Facility within 15 days after such date.

    (9 VAC 5-50-50 and 9 VAC 5-80-1180)

43. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the South Central Regional Office. These records shall include, but are not limited to:

    a. The daily and yearly consumption by the wood-fired energy system of wood, waste edge sealant, wax spillage, resin spillage, paper products, each in units of tons, and the daily and yearly consumption of WESP blowdown, and hydraulic and hot oil wastes, each in units of gallons. Each of these yearly consumption rates shall be calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    b. The yearly throughput of the flake dryers, in units of oven dried tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    c. The yearly throughput of the blenders, in units of oven dried tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    d. The yearly throughput of the press, in units of oven dried tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    e. The yearly throughput of powdered resin, in units of tons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    f. The yearly throughput of phenol formaldehyde liquid resin, in units of gallons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    g. The yearly throughput of MDI liquid resin, in units of gallons per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

    h. The yearly production of finished Oriented Strandboard, in units of square feet per year,

calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. The rated square footage shall be based on a panel thickness of 3/8 inches.

i. Records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the energy system; any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

j. For the stacks for RTO 1, RTO 2, RTO 4, and RTO 5:

(1) The magnitude of carbon monoxide emissions, any conversion factors used in the calculation of carbon monoxide emissions, including the date and time of measurement;

(2) Specific identification of each period of carbon monoxide emissions that occurs during startups, shutdowns, and malfunctions of the process, the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted; and

(3) The date and time identifying each period during which the parameter monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

k. The permittee shall maintain records of the monthly and yearly consumption by the Energy System's backup thermal oil heater of natural gas in units of cubic feet, and propane in units of gallons. Each yearly consumption rate shall be calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

l. The annual throughput of Oriented Strandboard through the six head sander, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

m. A monthly and annual material balance of VOC (in tons) for the brand name logo and nail mark application system including inks and cleaners. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period. The consecutive 12-month period sum shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. It should be noted that t-butyl acetate is a VOC for purposes of all recordkeeping, emission reporting, photochemical dispersion modeling and inventory requirements that apply to VOCs and shall be uniquely identified in emission reports. However, t-butyl acetate is not

a VOC for purposes of VOC emission standards, VOC emission limitations, or VOC content requirements.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-80-1180 and 9 VAC 5-50-50)

44. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

    a. Knowingly makes material misstatements in the application for this permit or any amendments to it;

    b. Fails to comply with the conditions of this permit;

    c. Fails to comply with any emission standards applicable to a permitted an emissions unit;

    d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard; or

    e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted.

    (9 VAC 5-80-1210 F)

45. **Right of Entry** - The permittee shall allow authorized local, state and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and Conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and Conditions of this permit or the State Air Pollution Control Board Regulations;

    c. To inspect at reasonable times any facility, equipment, or process subject to the terms and Conditions of this permit or the State Air Pollution Control Board Regulations; and

    d. To sample or test at reasonable times.

    For purposes of this Condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
    (9 VAC 5-170-130 and 9 VAC 5-80-1180)

46. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the South Central Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify South Central Regional Office in writing.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

47. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

48. **Maintenance/Operating Procedures** - At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

    a Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

    b Maintain an inventory of spare parts.

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

    (9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

49. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records

shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

50. **Permit Invalidation** - This permit to modify the Oriented Strandboard Facility shall become invalid, unless an extension is granted by the DEQ, if:

    a. A program of continuous modification is not commenced within the latest of the following:

        i. 18 months from the date of this permit;

        ii. Nine months from the date that the last permit or other authorization was issued from any other governmental entity;

        iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

    b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

    (9 VAC 5-80-1210)

51. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the South Central Regional Office of the change of ownership within 30 days of the transfer.
    (9 VAC 5-80-1240)

52. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
    (9 VAC 5-80-1180)

Attachment 1: WESP, and Dryer RTO Sequence of Operation

WESPs
When a dryer is processing flakes, the downstream WESP shall be operating.

Dryer RTOs
When one dryer is processing flakes, a minimum of one RTO shall be operating to control the dryer exhaust gas from the mixing chamber.

When two dryers are processing flakes, a minimum of two RTOs shall be operating to control the dryer exhaust gas from the mixing chamber.

When three or four dryers are processing flakes, a minimum of three RTOs shall be operating to control the dryer exhaust gas from the mixing chamber.